



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

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D5359-041

Job Sheet 187133



Part No: D5359-041

Job Qty: 4 pcs

Part Name: Strut Assembly, LH/RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/28/18

Job Tracking No:

Due Date: 12/14/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV B SHEETS 1,2,3 IPP Rev: A RQ 16.03.23 Verified by: DD IPP REV:B 17.01.20 AS PER REV.B DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Lead Time	DAS Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier			
110	Small Fab - 1 38.01	4 pcs	12/14/18	0.00	3.15	Small Fab - 1			58 FEB 21 2019 9-89	
						Small Fab - 2				
						Small Fab - 3				
						Small Fab - 4				
						Small Fab - 5				
						Small Fab - 6				
						Small Fab - 7				
112	Skidtubes - Bend - 2 - B4B	4 pcs	12/14/18	0.59	3.85	Skidtubes - Bend - B4B			58 FEB 21 2019 9-89	
114	Small Fab - 2 - B4B	4 pcs	12/14/18	0.00	3.15	Small Fab - 1 - B4B			58 MAR 11 2019 9-89	
						Small Fab - 2 - B4B				
						Small Fab - 3 - B4B				
						Small Fab - 4 - B4B				
						Small Fab - 5 - B4B				
						Small Fab - 6 - B4B				
						Small Fab - 7 - B4B				
120	QC 5	4 pcs	12/14/18	0.00	0.00	QC 5 - 10				
						QC 5 - 12				
						QC 5 - 17				
						QC 5 - 18				
						QC 5 - 19				
						QC 5 - 22				
						QC 5 - 24				
						QC 5 - 3				
						QC 5 - 38				
						QC 5 - 42				
						QC 5 - 43				
						QC 5 - 49				
						QC 5 - 51				
						QC 5 - 58				
						QC 5 - 68				

Plex 1/24/19 9:19 AM Dart.Hadley.Shannon

6131

589-3

51349

MAR 12 2019

130 Conventional Mill - 1 - B4B	4 pcs	12/14/18	0.00 4.57	QC 5 - 9	
				QC 5 - 50	
				QC 5 - 30	
				Conventional Mill - 1 - B4B	
				Conventional Mill - 2 - B4B	# 19/3/26
140 QC 2	4 pcs	12/14/18	0.00 0.00	QC 2 - 1	
				QC 2 - 12	
				QC 2 - 14	
				QC 2 - 17	
				QC 2 - 19	
				QC 2 - 2	
				QC 2 - 20	
				QC 2 - 22	
				QC 2 - 23	
				QC 2 - 25	
				QC 2 - 32	
				QC 2 - 33	
				QC 2 - 35	
				QC 2 - 38	
				QC 2 - 39	
				QC 2 - 4	
				QC 2 - 40	
				QC 2 - 44	
				QC 2 - 45	
				QC 2 - 48	
				QC 2 - 49	
				QC 2 - 50	
				QC 2 - 51	
				QC 2 - 52	
				QC 2 - 54	
				QC 2 - 56	
				QC 2 - 57	
				QC 2 - 62	
				QC 2 - 63	
				QC 2 - 8	# 19/3/26
150 QC 8	4 pcs	12/14/18	0.00 0.00	QC 8 - 12	
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 38	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	
				QC 8 - 9	
				QC 8 - 68	
				QC 8 - 67	
160 Powdercoat - 2 White GI(S)- B4B	4 pcs	12/14/18	0.00 0.75	QC 8 - 1 (A)	
				Powdercoat - 1 - B4B	

				Powdercoat - 2 - B4B	BY 19-03-26
				Powdercoat - 3 - B4B	
				Powdercoat - 4 - B4B	
170 QC 3	4 pcs	12/14/18	0.00 0.00	QC 3 - 10	
				QC 3 - 13	
				QC 3 - 15	
				QC 3 - 17	
				QC 3 - 18	
				QC 3 - 2	
				QC 3 - 26	
				QC 3 - 28	
				QC 3 - 3	
				QC 3 - 30	
				QC 3 - 34	
				QC 3 - 36	
				QC 3 - 38	
				QC 3 - 41	
				QC 3 - 51	
				QC 3 - 58	DAS 58 MAR 27 2019
				QC 3 - 59	9-89
				QC 3 - 6	
				QC 3 - 68	
				QC 3 - 9	
180 Small Fab - 3 - B4B	4 pcs	12/14/18	0.00 3.15	Small Fab - 1 - B4B	DAS 58 MAR 27 2019
				Small Fab - 2 - B4B	9-89
				Small Fab - 3 - B4B	
				Small Fab - 4 - B4B	
				Small Fab - 5 - B4B	
				Small Fab - 6 - B4B	
				Small Fab - 7 - B4B	
190 Conventional Mill - 2 - B4B	4 pcs	12/14/18	0.00 4.57	Conventional Mill - 1 - B4B	19-4-3
				Conventional Mill - 2 - B4B	
200 QC 5	4 pcs	12/14/18	0.00 0.00	QC 5 - 10	
				QC 5 - 12	
				QC 5 - 17	
				QC 5 - 18	
				QC 5 - 19	
				QC 5 - 22	
				QC 5 - 24	
				QC 5 - 3	
				QC 5 - 38	
				QC 5 - 42	
				QC 5 - 43	
				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	DAS APR 03 2019 68
				QC 5 - 9	9-89
				QC 5 - 50	
				QC 5 - 30	
210 Small Fab - 4 - B4B	4 pcs	12/14/18	0.00 3.15	Small Fab - 1 - B4B	DAS 58 APR 04 2019
				Small Fab - 2 - B4B	9-89
				Small Fab - 3 - B4B	
				Small Fab - 4 - B4B	
				Small Fab - 5 - B4B	
				Small Fab - 6 - B4B	
				Small Fab - 7 - B4B	

220	QC 5	4 pcs	12/14/18	0.00 0.00	QC 5 - 10	
					QC 5 - 12	
					QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 38	
					QC 5 - 42	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
230	Packaging 3-1 - Stock - B4B	4 pcs	12/14/18	0.00 0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
240	QC 21 - SA	4 pcs	12/14/18	0.00 0.00	QC 21 - SA - 21	
					QC 21 - SA - 70	

DAS
40
9-89

APR 11 2019

Stolen B

APR 18 2019

Part Op 110 - Small Fab - 1- CUT SQUARE TUBING AT 48.00"
 Descriptions: 112 - CNC Alpha 160 Bender - 1- FORM TUBING AS PER DWG USING DT10300 USING CNC BENDER 100 AND
 FOLIO 32 BEND PROG D5359.

- 114 - Small Fab - 1- TRIM OFF EXTRA MATERIAL USING DT10300 2- DEBURR
 120 - QC5- Inspect part completeness to step on W/O
 130 - Manufacture as per dwg - 1- DRILL HOLES IN BOTH ENDS OF TUBE AS PER DWG 2- DEBURR
 140 - QC2- Inspect parts off machine FAI/FAIB
 150 - QC8- Inspect parts - second check
 160 - White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel - START TIME: 3:30 OVEN TEMPERATURE: 400°
 FINISH TIME: 4:00 MR8997
 170 - QC3- Inspect Part Finish
 180 - Small Fab - 1- ASSEMBLE INSERT IN TUBE AS PER DWG ***DO NOT INSTALL CLEVIS***
 190 - Manufacture as per dwg - 1- DRILL WITNESS HOLES TRUE BOTH WALLSW AS PER DWG, SHEET 2, DETAIL A AND VIEW B-B 2- DEBURR
 200 - QC5- Inspect part completeness to step on W/O
 210 - Small Fab - ASSEMBLE CLEVIS AND NUT AS PER DWG
 220 - QC5- Inspect part completeness to step on W/O
 230 - Identify as per dwg & Stock Location: _____
 240 - QC21- Final Inspection - Work Order Release

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M304TS0.750W.049	304 Sq Tube .75X.75X.049W	13.3360 ft (3.334 ea)	110-Small Fab - 1	5140974
AN3CH11A	Bolt (Drilled Head) 301687	8 Ea (2 ea)	180-Small Fab - 3 - B4B	5138621
AN3CH12A	Bolt (Drilled Head) 3080446	8 Ea (2 ea)	180-Small Fab - 3 - B4B	5138621
D5359-3	Insert	8 pcs (2 ea)	180-Small Fab - 3 - B4B	5137124
MS21043-3	Nut	16 Ea (4 ea)	180-Small Fab - 3 - B4B	5137124
NAS1149C0363R	Washer	40 Ea (10 ea)	180-Small Fab - 3 - B4B	5137124
D2690-6	Lanyard	8 pcs (2 ea)	210-Small Fab - 4 - B4B	5149981
D5359-5	Clevis, Aircraft End	4 pcs (1 ea)	210-Small Fab - 4 - B4B	5149981
D5359-7	Clevis, Basket End	4 pcs (1 ea)	210-Small Fab - 4 - B4B	5149981
MS17984-C405	Pin, Quick Release	4 Ea (1 ea)	210-Small Fab - 4 - B4B	5135101
MS17984-C608	Pin, Quick Release	4 Ea (1 ea)	210-Small Fab - 4 - B4B	5135101
NAS509-6C	Nut	8 Ea (2 ea)	210-Small Fab - 4 - B4B	3016878

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
110-Small Fab - 1	M304TS0.750W.049	13	525	0
180-Small Fab - 3 - B4B	AN3CH11A	8	24	0
	AN3CH12A	8	28	0
	D5359-3	8	8	0
	MS21043-3	16	723	0
	NAS1149C0363R	40	685	0
210-Small Fab - 4 - B4B	D2690-6	8	40	0
	D5359-5	4	12	0
	D5359-7	4	8	0
	MS17984-C405	4	13	0
	MS17984-C608	4	14	0
	NAS509-6C	8	20	0

Part Specifications

Specifications could not be found.



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D5359-041
Job Sheet 187133



Part No: D5359-041

Job Qty: 4 ea

Part Name: Strut Assembly, LH/RH



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/28/18

Job Tracking No:

Due Date: 12/14/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV B SHEETS 1,2,3 IPP Rev: A RQ 16.03.23 Verified by: DD IPP REV:B 17.01.20 AS PER REV.B DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea		12/14/18	0.00	0.00	Start Up Small Fab-4		
110	Small Fab	4 pcs		12/14/18	0.00	3.15	Small Fab-9		
112	CNC Bend Skid tubes	4 pcs		12/14/18	0.59	3.85	CNC Bend Crosstube		
114	Small Fab	4 pcs		12/14/18	0.00	3.15	Small Fab-9		
120	QC	4 pcs		12/14/18	0.00	0.00	QC5		
130	Mill Conv	4 pcs		12/14/18	0.00	4.57	Conv Mill 1		
140	QC	4 pcs		12/14/18	0.00	0.00	QC2 Machining-4		
150	QC	4 pcs		12/14/18	0.00	0.00	QC8 Machining-4		
160	Powdercoat	4 pcs		12/14/18	0.00	0.75	Powdercoat2		
170	QC	4 pcs		12/14/18	0.00	0.00	QC3		
180	Small Fab	4 pcs		12/14/18	0.00	3.15	Small Fab-9		
190	Mill Conv	4 pcs		12/14/18	0.00	4.57	Conv Mill 1		
200	QC	4 pcs		12/14/18	0.00	0.00	QC5		
210	Small Fab	4 pcs		12/14/18	0.00	3.15	Small Fab-9		
220	QC	4 pcs		12/14/18	0.00	0.00	QC5		
230	Packaging	4 pcs		12/14/18	0.00	0.00	Packaging3-2		
240	QC21-SA	4 Ea		12/14/18	0.00	0.00	QC21		

Part Op 110 - 1- CUT SQUARE TUBING AT 48.00"

Descriptions: 112 - 1- FORM TUBING AS PER DWG USING DT10300 USING CNC BENDER 100 AND FOLIO 32 BEND PROG D5359.

114 - 1- TRIM OFF EXTRA MATERIAL USING DT10300 2- DEBURR

130 - 1- DRILL HOLES IN BOTH ENDS OF TUBE AS PER DWG 2- DEBURR

160 - START TIME: _____ OVEN TEMPERATURE: _____ FINISH TIME: _____

180 - 1- ASSEMBLE INSERT IN TUBE AS PER DWG ***DO NOT INSTALL CLEVIS***

190 - 1- DRILL WITNESS HOLES TRUE BOTH WALLSW AS PER DWG, SHEET 2, DETAIL A AND VIEW B-B 2- DEBURR

210 - ASSEMBLE CLEVIS AND NUT AS PER DWG

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M304TS0.750W.049	304 Sq Tube .75X.75X.049W	13.3360 ft (3.334 ea)	90-Start up Operation	
AN3CH11A	Bolt (Drilled Head)	8 Ea (2 ea)	180-Small Fab	
AN3CH12A	Bolt (Drilled Head)	8 Ea (2 ea)	180-Small Fab	

D5359-3	Insert	8 Ea (2 ea)	180-Small Fab
MS21043-3	Nut	16 Ea (4 ea)	180-Small Fab
NAS1149C0363R	Washer	40 Ea (10 ea)	180-Small Fab
D2690-6	Lanyard	8 Ea (2 ea)	210-Small Fab
D5359-5	Clevis, Aircraft End	4 Ea (1 ea)	210-Small Fab
D5359-7	Clevis, Basket End	4 Ea (1 ea)	210-Small Fab
MS17984-C405	Pin, Quick Release	4 Ea (1 ea)	210-Small Fab
MS17984-C608	Pin, Quick Release	4 Ea (1 ea)	210-Small Fab
NAS509-6C	Nut	8 Ea (2 ea)	210-Small Fab

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	M304TS0.750W.049	13	449	0
180-Small Fab	AN3CH11A	8	25	0
	AN3CH12A	8	28	0
	D5359-3	8	8	0
	MS21043-3	16	886	0
	NAS1149C0363R	40	598	0
210-Small Fab	D2690-6	8	13	0
	D5359-5	4	8	0
	D5359-7	4	4	0
	MS17984-C405	4	13	0
	MS17984-C608	4	6	0
	NAS509-6C	8	15	0

Part Specifications

Specifications could not be found.

Entered: TRDate: Oct 24/19

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. 19-7531Route update only ☐

Job: <u>187133</u> Part No. <u>D5359-041</u>	DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☒ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐		
Date: <u>19.02.14</u>	Sequence #:	QTY Affected: <u>4</u>	MRB (QSI042) <u>INSP 12</u> <u>4</u> <u>19/3/14</u>	
Description Work Order Deviation D5359-3 Insert will not install in tubing (tubing is too small). Tubing should be 0.75 x 0.75 x 0.049. OD should be ±0.005 per spec. ASTM A269. However mat'l is 0.749 x 0.741 x 0.049 (out of spec).		Disposition Face Face D5359-3 evenly to allow fit in tubing. Face both sides evenly to maintain center of tapped hole. Part is nominally 0.650 x 0.650, recommend recommend 0.640 x 0.647. Acceptable deviation, part is not under high stress!		Completed By <u>19/7/22</u> Lead hand / Supervisor DAS 30 9-89 <u>19/07/22</u> QC / QA Coordinator DAS 68 9-89 APR 11 2019
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☒ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☒ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread		
Other/Details:				